

### ABSTRACT

5 A reactor coolant system of a pressurized water nuclear reactor with fuel assemblies in the core is simultaneously shutdown and decontaminated in less than 90 hours after the shutdown is initiated. A LOMI or Can-Derem decontamination reagent is added to reactor coolant to reduce iron and nickel in oxidized coatings before removing dissolved hydrogen and reducing the gamma emitting activity of the reactor coolant.